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EXAMINER	
PEACHES, RANDY	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/986,778	SENGODAN ET AL.	
	Examiner	Art Unit	
	RANDY PEACHES	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-18,20-25,27-31 and 33-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10, 12-18, 20-25, 27-31 and 33-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. ***Claims 1-4, 9-11, 29 and 34*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1).

Regarding ***claims 1 and 29***, Willars et al teaches of a method of handing off a user equipment (UE), which reads on claim "mobile terminal", from a Serving Network, which reads on claim "first network", served by a Serving Radio Network Controller (SRNC), which reads on claim "first access device", to a Target or Drift Network, which reads on claim "second network", served by a Target/Drift Radio Network Controller (DRNC), which reads on claim "second access device", comprising the steps of:

- sending an authorization inquiry from the said SRNC to the said DRNC, that includes an IMSI identifying the said UE. See paragraphs [0030 and 0063];
- querying a HLR, which reads on claim "database", maintained by a said Serving Network associated with the said UE to determine whether the said UE is authorized to be handed off to the said DRNC. See paragraphs [0066-0067];

- in response to receiving the allowed list, the said DRNC responds by sending a filtered list of DRNC's, which in turn is received by the said SRNC which communicates this information to the UE, which reads on claim "determining that the mobile terminal is authorized to be handed off to the second access device, performing a handoff operation from the first access device to the second access device". See paragraph [0066], wherein the said DRNC then has full control over the connection with the terminal. The Examiner further maintains that in the field of endeavor, when a handoff occurs the target or drift node take full control of the roaming user after handoff.; and
- in response to determining that the mobile terminal is not authorized to be handed off to the second access device, inhibiting the handoff operation from the first access device to the second access device. See paragraph [0077];

However, Willars fails to clearly teach of a first and second access router of two different networks.

Yukie teaches in paragraph [0022] of two networks where a first is a packet switched network for data and a second is a circuit switched network each are interconnected by a network gateway (250)(see paragraph [0026]). Yukie further teaches that the second network is a secondary network whereby allow subscribers of each network are capable to roam in the other based on the relationship with the first network. The relationship is based on the selection criteria i.e. data rate, cost, energy consumption, or combination thereof. See paragraph [0030].

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Yukie in order to provide efficient handoff between two different networks via the authentication of a first user in a first network being allow access to roam in a second network.

Regarding ***claim 2***, as the combination of Willars and Yukie are made, the combination according to ***claim 1***, Willars et al teaches of method of ***claim 1***, wherein step (3) comprises the step of transferring context information from the said SRNC to the DRNC. See paragraph [0068].

Regarding ***claims 3 and 34***, as the combination of Willars and Yukie are made, the combination according to ***claims 1 and 29***, Willars discloses wherein steps (1) through (4) are performed without allocating any radio frequency resources of the DRNC to communicate with the UE until after it is determined that the UE is authorized to be handed off to the DRNC. See paragraph [0011].

Regarding ***claim 4***, as the combination of Willars and Yuki are made, the combination according to ***claim 1***, Willars discloses wherein step (2) comprises the step of querying the database on the basis of a list of DRNC's that are authorized to accept handoffs from the UE. See paragraph [0066-0067].

Regarding ***claim 9***, as the combination of Willars and Yuki are made, the combination according ***claim 1***, wherein steps (1) to (4) are conducted between said RNC's that use same access technology. See paragraph [0048].

Regarding ***claim 10***, as the combination of Willars and Yukie are made, the combination according to ***claim 1***, Willars et al. teaches in paragraph [0023] wherein between said RNC's, and heterogeneous access technologies are used.

Regarding ***claim 11***, as the combination of Willars and Yukie are made, the combination according to ***claim 1***, Willars discloses wherein step (2) comprises the steps of:

- sending the authorization inquiry to a MSC, which reads on claim "administrative server" associated with the said Target or Drift Network. See paragraph [0067]; and
- sending the authorization inquiry from the said MSC to a said SRNC that accesses the database. See paragraph [0067].

2. ***Claims 5 and 31*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1) in further view of Chambert (U.S. Patent Number 5,499,387).

Regarding ***claims 5 and 31***, the combination, according to ***claims 1 and 29***, fails to disclose wherein the step of querying the database to determine authorization based on a time of day.

Chambert teaches in column 3 lines 54-64, where time monitoring unit is used to prevent handoff to neighboring cells during a certain time.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1) to include Chambert (U.S. Patent Number 5,499,387 in order restrict handover to certain cells during a time when there are nominally higher capacity.

3. ***Claims 7, 8, 30 and 33*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1) in further view of Kennedy, III et al. (U.S. Patent Number 5,966,658).

Regarding ***claims 7, 8, 30 and 33***, the combination according to ***claims 1 and 29***, the combination fails to disclose wherein the step of querying the database on the basis of dynamic loading conditions and such that authorization is dependent upon dynamic loading conditions.

Kennedy, III et al. teaches in column 5 lines 51-67 wherein the connection of a communication path during handoff is contingent upon the characteristics of transmission time current load, speed, propagation delay, etc.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1) to include Kennedy, III et al. (U.S. Patent Number 5,966,658) in order to prevent the handoff process from over burdening the said system when candidates for handoff are processed

3. ***Claims 12 and 13*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1) in further view of Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1).

Regarding ***claims 12 and 13***, the combination according to ***claim 1***, fails to clearly disclose wherein steps (a) and (b) are performed using the DIAMETER protocol and SIP protocol.

Igarashi et al teaches in paragraphs [0094, 0104] wherein the mobile node is able to transport information via various protocols, e.g. SIP and DIAMETER protocol, to facilitate the functions of Authentication, Authorization and Accounting.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1) to include Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1) in order to comply with Internet standards of transporting information via IP.

4. ***Claims 14-17, 22-26*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1) in view of Funato et al. (U.S. Patent Publication Number 2003/0087646 A1).

Regarding ***claim 14***, Willars et al teaches of a method of handing off a user equipment (UE), which reads on claim "mobile terminal", from a Serving Network, which reads on claim "first network", served by a Serving Radio Network Controller (SRNC), which reads on claim "first access device", to a Target or Drift Network, which reads on claim "second network", served by a Target/Drift Radio Network Controller (DRNC), which reads on claim "second access device", comprising the steps of:

- sending an authorization inquiry from the said SRNC to the said DRNC, that includes an IMSI identifying the said UE. See paragraphs [0030 and 0063];

- querying a HLR, which reads on claim "database", maintained by a said Serving Network associated with the said UE to determine whether the said UE is authorized to be handed off to the said DRNC. See paragraphs [0066-0067];
- in response to receiving the allowed list, the said DRNC responds by sending a filtered list of DRNC's, which in turn is received by the said SRNC which communicates this information to the UE, which reads on claim "determining that the mobile terminal is authorized to be handed off to the second access device, performing a handoff operation from the first access device to the second access device". See paragraph [0066], wherein the said DRNC then has full control over the connection with the terminal. The Examiner further asserts that in the field of endeavor, when the a handoff occurs the target or drift node take full control of the roaming user after handoff.; and
- in response to determining that the mobile terminal is not authorized to be handed off to the second access device, inhibiting the handoff operation from the first access device to the second access device. See paragraph [0077];

However, Willars fails to clearly teach of a first and second access router of two different networks.

Yukie teaches in paragraph [0022] of two networks where a first is a packet switched network for data and a second is a circuit switched network each are interconnected by a network gateway (250)(see paragraph [0026]). Yukie further teaches that the second network is a secondary network whereby allow subscribers of each network are capable to roam in the other based on the relationship with the first

network. The relationship is based on the selection criteria i.e. data rate, cost, energy consumption, or combination thereof. See paragraph [0030].

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Yukie in order to provide efficient handoff between two different networks via the authentication of a first user in a first network being allow access to roam in a second network.

The combination of Willars and Yukie fail to clearly disclose wherein the said equipment performing the handoff process is an access router.

Funato et al teaches in paragraphs [0036-0039], wherein the system includes a plurality of access routers (20), used to forward data between networks.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Yukie (U.S. Patent Publication Number 20030036392 A1) to include Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in order to transfer the functionality of mediating the handover processing to the access router which in turn optimizes the system by preventing the use to radio resources for handoffs.

Regarding ***claim 15***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, Willars et al teaches wherein step (3)

comprises the step of transferring context information from the said SRNC to the DRNC. See paragraph [0068].

Regarding ***claim 16***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, Willars et al teaches wherein steps (1) through (4) are performed without allocating any radio frequency resources of the DRNC to communicate with the UE until after it is determined that the UE is authorized to be handed off to the DRNC. See paragraph [0011].

Regarding ***claim 17***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, Willars et al teaches of a method wherein step (2) comprises the step of querying the database on the basis of a list of DRNC's that are authorized to accept handoffs from the UE. See paragraph [0066-0067].

Regarding ***claim 22***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, Funato et al. discloses in paragraph [0037] wherein the access router serves access devices, which reads on claim "mobile terminals", using Internet Protocol.

Regarding ***claim 23***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, Willars et al. teaches in paragraph [0023] wherein between said RNC's, heterogeneous access technologies are used.

Regarding ***claim 24***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 23***, Willars et al. teaches in paragraph [0010] wherein the system uses GPRS technology.

Regarding ***claim 25***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, Willars et al teaches wherein steps (1) to (4) are conducted between said RNC's that use same access technology. See paragraph [0048].

Regarding ***claim 26***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, Willars et al teaches wherein step (2) comprises the step of sending an authorization inquiry to a said Serving Network associated with the said UE. See paragraphs [0066-0067].

5. ***Claim 18*** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1), Yukie (U.S. Patent Publication Number 20030036392 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in further view of Chambert (U.S. Patent Number 5,499,387).

Regarding ***claim 18***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, fails to clearly disclose wherein the step of querying the database to determine authorization based on a time of day.

Chambert teaches in column 3 lines 54-64, where time monitoring unit is used to prevent handoff to neighboring cells during a certain time.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1), Yukie (U.S. Patent Publication Number 20030036392 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in further view of Chambert (U.S. Patent Number 5,499,387) in order restrict handover to certain cells during a time when there are nominally higher capacity.

6. ***Claims 20 and 21*** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1), Yukie (U.S. Patent Publication Number 20030036392 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1)in view of Kennedy, III et al. (U.S. Patent Number 5,966,658).

Regarding ***claims 20 and 21,*** as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 14***, fails to disclose wherein the step of querying the database on the basis of dynamic loading conditions and such that authorization is dependent upon dynamic loading conditions.

Kennedy, III et al. teaches in column 5 lines 51-67 wherein the connection of a communication path during handoff is contingent upon the characteristics of transmission time current load, speed, propagation delay, etc.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1), Yukie (U.S. Patent Publication Number 20030036392 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in further view of Kennedy, III et al. (U.S. Patent Number 5,966,658) in order to prevent the handoff process from over burdening the said system when candidates for handoff are processed.

7. ***Claims 27 and 28*** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1), Yukie (U.S. Patent Publication Number 20030036392 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in further view of Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1).

Regarding ***claims 27 and 28***, as the combination of Willars et al., Yukie and Funato et al are made, the combination according to ***claim 26***, fails to clearly disclose wherein steps (a) and (b) are performed using the DIAMETER protocol and SIP protocol.

Igarashi et al teaches in paragraphs [0094, 0104] wherein the mobile node is able to transport information via various protocols, e.g. SIP and DIAMETER protocol, to facilitate the functions of Authentication, Authorization and Accounting.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1), Yukie (U.S. Patent Publication Number 20030036392 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in further view of Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1) in order to comply with Internet standards of transporting information via IP.

Response to Arguments

Applicant's arguments filed 9/12/2008 have been fully considered but they are not persuasive.

The Applicant specifically argues that Willars fails to teach or suggest 1.) a method of handing off a mobile terminal from a first network served by a first access device to a second network served by a second access device. The Applicant further asserts that Willars does not teach or suggest 2.) "receiving from a first access router in a first network by a second access router in a second network that serves a different service area a request for authorization inquiry including an identifier that identifies a mobile terminal that is a candidate for a handoff operation "or " causing a database to be queried via a server to determine whether the second access router is authorized to accept a handoff operation for the mobile terminal."

The Examiner respectfully disagrees. To further explain, the Examiner respectfully brings to the applicant's attention, in respect to argument :

1.), Willars paragraph [0079] wherein Willars teach that a handover algorithm can be for different user equipment wich belong to different PLMN's (Public Land Mobile Networks) which infers that the there can be more than one network in which the teaching of Willars are applicable with. FIGURE 11 illustrates wherein a check is made to determine if a user of a PLMN (A), which read on claim "first network," is authorized to be handover to PLMN (B) which read on claim "second network," whereby Willars teach "*of a situation for a network having a PLMN="B". As step 11-1, a handover is initiated and allowed for a particular user equipment unit. A check is made at step 11-2 whether the home PLMN-id of the user equipment unit is "A". If not, a first handover algorithm is performed as indicated by step 11-4. Otherwise, a second handover algorithm is performed as indicated by step 11-3.* "

2.) Willars in paragraph [0066] discloses whereby a record for allowed areas for a specific subscriber is maintained in the home location register (HLR), which reads on claim "database," of that subscriber. The Examiner interprets the language to define how the HLR is queried for information as to what networks the said subscriber is authorized to be handed off to. Therefore, the Examiner concludes that Willars does indeed teach on the claimed language of the instant application.

In conclusion, the Examiner maintains, based the above reasoning, that ***claims 1-10, 12-18, 20-25, 27-31 and 33-41*** stand rejected.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RANDY PEACHES whose telephone number is (571) 272-7914. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Peaches/
Examiner, Art Unit 2617

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617